

REMARKS**Summary of the Office Action**

Claims 12 and 13 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being dependent on apparatus claim 10 in error.

The disclosure stands objected to because of a minor informality.

Claims 1, 4, 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom et al. (U.S. Patent No. 5,764,280) (hereinafter "Bloom") taken with Battersby (U.S. Patent No. 6,069,650) (hereinafter "Battersby") in view of Lippert (U.S. Patent No. 4,754,327) (hereinafter "Lippert").

Claims 6 and 12 (as best understood) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom taken with Battersby in view of Lippert as applied to claims 1 and 11 respectively, and further in view of Matsumura et al. (U.S. Patent No. 6,246,451) (hereinafter "Matsumura").

Claims 7 and 13 (as best understood) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom taken with Battersby in view of Lippert as applied to claims 1 and 11 respectively, and further in view of Kato et al. (U.S. Patent No. 5,754,280) (hereinafter "Kato").

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom taken with Battersby in view of Lippert as applied to claim 1, and further in view of Waldern (U.S. Patent No. 6,407,724) (hereinafter "Waldern") taken with Matsumura.

Claims 2-3, 5, and 8-9 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Summary of the Response to the Office Action

Applicant has amended the specification and claims 11-13 improve their form and correct minor typographical errors. Accordingly, claims 1-13 remain pending for consideration.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 12 and 13 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being dependent on apparatus claim 10 in error. Applicant has amended claims 12 and 13 to each be dependent on method claim 11 in accordance with the Examiner's comments. Applicant respectfully submits that claims 12 and 13, as amended, fully comply with the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 112, second paragraph be withdrawn.

Objection to the Disclosure

The disclosure stands objected to because of a minor informality, as indicated on page 2, paragraph 4 of the Office Action. The Office Action alleges that Fig. 1 does not show any element designated with the number "9." Applicant respectfully traverses this objection to the disclosure because Fig. 1 clearly shows stereoscopic frame labeled "9" at the bottom of the right-hand most portion of the drawing.

Applicant notes, however, that upon review of the disclosure, page 5, lines 1-2 includes an entire claim preamble, including numbering (claim "10") and dependency ("according to claim 1"). Applicant has amended this portion of the Object and Summary of the Invention portion of the application with language such as "in a further aspect of the invention..." to be

consistent with the rest of the Object and Summary of the Invention and to better conform to standard U.S. practice.

Applicant also noted that the first occurrence of the word “of” in line 7 of page 10 was meant to be “and”. Accordingly, this change has also been incorporated into the specification. Applicant respectfully submits that no new matter has been incorporated into the specification by these changes, as they are merely being made to improve the form of the specification.

Rejections under 35 U.S.C. § 103(a)

Claims 1, 4, 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom taken with Battersby in view of Lippert. Claims 6 and 12 (as best understood) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom taken with Battersby in view of Lippert as applied to claims 1 and 11 respectively, and further in view of Matsumura. Claims 7 and 13 (as best understood) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom taken with Battersby in view of Lippert as applied to claims 1 and 11 respectively, and further in view of Kato. Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bloom taken with Battersby in view of Lippert as applied to claim 1, and further in view of Waldern taken with Matsumura. These rejections are respectfully traversed for at least the following reasons.

With regard to independent claims 1 and 11, the Office Action appears to allege that Bloom taken with Battersby teach all limitations of these claims except for a teaching of “a stereoscopic frame for defining a space for accommodating said image-formation plane.” The Office Action then applies Lippert for allegedly teaching such “a stereoscopic frame for defining a space for accommodating said image-forming plane (col. 3, lines 55-62).” The Office Action

goes on to allege that it “would have [been] obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device” as taught by Bloom taken with Battersby “the feature as taught by Lippert in order to establish the border which encompasses the subframe that make of the stereoscopic image.” Applicant respectfully submits that, despite the Examiner’s assertions and the discussion above, particular limitations recited in claims 1 and 11 are neither shown nor suggested by the applied combination of references.

In particular, the portion of Lippert cited to by the Examiner discusses a “stereoscopic frame” that is composed from blocks 38 and 42 as shown in Fig. 6. See col. 3, lines 55-62 of Lippert. However, Applicant respectfully submits that Fig. 6 of Lippert illustrates a graphical representation of a time-based sequence of information for right and left eye viewing. The “stereoscopic frame” shown on this time-axis graph is composed of video information blocks 38 and 42. In other words, the term “frame” in Lippert is directed to a “video frame.” Applicant respectfully submits that this is clearly very different from the “stereoscopic frame” recited in claims 1 and 11 of the instant invention which is arranged to define a physical space for accommodating the recited image-formation plane. Applicant respectfully submits that the stereoscopic frame disclosed in the instant application is provided to define a physical space for accommodating the image-formation plane and that such an arrangement is neither shown nor suggested by any of Bloom, Battersby, Lippert, Matsumura, Kato and Waldern.

Moreover, the applied art of record fails to teach or suggest other limitations recited in claims 1 and 11 such as the recitation that the effective area of the image transmitting panel being “larger than that of the stereoscopic image contained in said two-dimensional picture”.

Accordingly, Applicant respectfully asserts that the rejections under 35 U.S.C. § 103(a) should be withdrawn because the applied art of record, whether taken singly or combined, do not

teach or suggest each feature of independent claims 1 and 11. MPEP § 2143.03 instructs that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 409 F.2d 981, 180 USPQ 580 (CCPA 1974)." Furthermore, Applicant respectfully asserts that dependent claims 2-10 and 12-13 are allowable at least because of their dependence from claims 1 and 11, respectively, and the reasons set forth above.

Moreover, the Examiner is thanked for his indication that claims 2-3, 5, and 8-9 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In light of the arguments presented above with regard to independent claim 1, on which each of claims 2-3, 5, and 8-9 depend, the withdrawal of the objection of these claims is respectfully requested.

Attached hereto is a marked-up version of the changes made by the current amendment. The attachment is captioned "**Version with Markings to Show Changes Made.**"

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required,

including any required extension of time fees, or credit any overpayment to Deposit Account

50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR
EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Paragraph at page 5, lines 1-3 has been amended as follows:

~~[10. An]~~ **In a further aspect of the invention, the** apparatus for displaying a stereoscopic two-dimensional picture ~~{according to claim 1, wherein said}~~ **includes a** display unit **that includes:** ~~{comprises;}~~

Paragraph at page 5, lines 10-11 has been amended as follows:

~~[A]~~ **In a further aspect of the invention, a** method for displaying a stereoscopic two-dimensional picture according to the invention **includes** ~~{comprises the steps of}~~:

Paragraph beginning on page 9, line 16 has been amended as follows:

The microlens array 22 comprises a plurality of microlenses arranged two-dimensionally. As is shown in Fig. 1, the microlens array 22 is a micro-convex-lens board formed by integrating every pair of lens-array half bodies 24 with a spacer. The micro-convex-lens board is formed of a plurality of lens systems. Each lens system includes of a pair of convex lenses coaxially arranged in the optical axes thereof. The lens systems are arranged in a two-dimensional manner so that the optical axes of the lens systems are parallel to one another. Fig. 2 is a sectional view of the microlens array 22 sectioned at a plane containing optical axes 26 of each convex lens 25. The convex lens 25, which is formed on the right side face of the lens-array half body 24 shown on the right side of the figure, has a curvature larger than that of other convex lenses. Distance L2, which is the distance between the focus of the lens-array half body 24 on the image side (image-formation plane 30) shown on the right side of the figure and the lens surface, is longer

than distance L1, which is the distance between the color liquid crystal display panel 10a and ~~of~~ the lens-array half body 24 shown on the left side of the figure and the lens surface.

Accordingly, the image-formation plane 30 is sufficiently distant from the image transmitting panel 20, making it possible for the apparatus to display a compact image by reducing the depth thereof. As shown in Fig. 2, each convex lens 25 has the same quality of material and shape. For example, the convex lenses 25 are formed to align adjoining each other in the form of a matrix on a transparent flat plate. The optical axis 26 of the convex lens 25 coincides with each other between a pair of adjacent half bodies 24 of the lens array. Although the material of the convex lens 25 and the transparent flat plate 27 is acrylic resin, the transparent flat plate may be made of glass.

IN THE CLAIMS:

Claims 11-13 have been amended as follows:

11. (Amended) A method for displaying a stereoscopic two-dimensional picture comprising the steps of:

providing a display unit having a flat image display screen for displaying a two-dimensional picture containing a stereoscopic image;

arranging an image transmitting panel parallel to and apart from said image display screen, said image transmitting panel having a microlens array of a plurality of lenses and an effective area larger than that of the stereoscopic image contained in said two-dimensional picture, and a lens frame area surrounding a perimeter of the effective area of said microlens array; and

arranging a stereoscopic frame for defining a space for accommodating ~~{said}~~ an image-formation plane so that said image transmitting panel generates ~~{an}~~ said image-formation plane for displaying a real image of said two-dimensional picture in a space located on an opposite side to said display unit with respect to said microlens array.

12. (Amended) A method for displaying a stereoscopic two-dimensional picture according to claim ~~{10}~~ 11, further comprising a step of generating a picture signal for exhibiting an image portion other than stereoscopic images which is filled with a dark color in the two-dimensional picture to be reproduced and supplying the picture signal to said display unit.

13. (Amended) A method for displaying a stereoscopic two-dimensional picture according to claim ~~{10}~~ 11, further comprising a step of placing an image-formation-spot indicating unit adjacent to said image-formation plane.